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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,126

03/11/2004

Avi Kopelman

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06/07/2007

NATH & ASSOCIATES

112 South West Street

Alexandria, VA 22314

EXAMINER

WILSON, JOHN J

ART UNIT

PAPER NUMBER

3732

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/797,126

Applicant(s)

KOPELMAN ET AL.

Examiner

John J. Wilson

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure, as originally filed, does not contain support for the claim language "exclusively" now used, and as such, this language is held to be new matter. The disclosure does positively state that the teeth and brackets are virtual, however, there is no teaching that these elements are used exclusively.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 9, 11, 12 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731). Taub (380) shows using a virtual image of at least one tooth and of the orthodontic element in proper position thereon and teaches the virtual image is used on a display and used as a guide while placing an orthodontic element on the patient, page 5, lines 8-14. Taub (380) does not specifically state that the virtual guide is displayed in three dimensions. Jordan teaches displaying in three dimensions, column 8, lines 50-53. It would be obvious to one of ordinary skill in the art to modify Taub (380) to include displaying in three dimensions in order to better view the teeth and orthodontic elements. Taub (380) teaches that the display may "consist of a virtual image of both at least one tooth and of the orthodontic element in a proper position of the later", shows the method steps claimed. To exclusively use just these virtual images is an obvious matter of choice in not using a method step to one of ordinary skill in the art. To use different sets of teeth is an obvious matter of choice in the teeth it is desired to work on to the skilled artisan. As to claim 5, Taub (380) is used to help place brackets, to display in order of bracket placement would be obvious to one of ordinary skill in the art.

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731) further in view of Hamilton (6413083). The above combination shows the elements as described above, however, does not show the use of a printer. Hamilton teaches using a printer 108. It would be obvious to one of ordinary skill in the art to modify the above combination to include

Art Unit: 3732

printing information as is well known and shown and suggested by Hamilton in order to make use of known ways of communicating in the art.

Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731), Taub et al (WO 99/34747) and further in view of Chishti et al (6227850). The above combination teaches the elements as described above, however, does not show transmitting data to a remote location. Chishti teaches using a remote location, column 14, lines 35-45. It would be obvious to one of ordinary skill in the art to modify the above combination to include using a remote location as shown by Chishti in order to more conveniently provide orthodontic planning.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731), Taub et al (WO 99/34747) and further in view of Sachdera et al (6350120). The above combination shows the elements as described above, however, does not show the use of a database of virtual brackets. Sachdera teaches using a library of virtual brackets, column 6, lines 25-31. It would be obvious to one of ordinary skill in the art to modify the above combination to include using a database of virtual brackets as shown by Sachdera in order to better simulate the brackets intended to be placed on the teeth.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taub et al (WO 99/16380) in view of Jordan et al (6152731), Taub et al (WO 99/34747) and Sachdera et al (6350120). Taub (380) shows using a virtual image of at least one tooth and of the orthodontic element in proper position thereon and teaches the virtual image is used on a display and used as a guide while placing an orthodontic element on the patient, page 5, lines 8-14. Taub (380) does not specifically state that the virtual guide is displayed in three dimensions. Jordan teaches displaying in three dimensions, column 8, lines 50-53. It would be obvious to one of ordinary skill in the art to modify Taub (380) to include displaying in three dimensions in order to better view the teeth and orthodontic elements. The above combination does not show the use of a database of virtual brackets. Sachdera teaches using a library of virtual brackets that represent standard brackets, column 6, lines 25-31. It would be obvious to one of ordinary skill in the art to modify the above combination to include using a database of virtual brackets as shown by Sachdera in order to better simulate the brackets intended to be placed on the teeth.

### ***Response to Arguments***

Applicant's arguments filed April 27, 2007 have been fully considered but they are not persuasive. With respect to the above new matter rejection based on the limitation of displaying "an exclusively virtual image", applicant cites page 4 (3), lines 7-15, which teaches that a virtual representation is the basis for the displayed image. Applicant argues that this teaching of "the basis" and no "a basis" adequately teaches

Art Unit: 3732

that the displayed image is exclusively a virtual image. Applicant further argues that at page 4, lines 20-23, the teaching from an output data, "the output data drives the display to display the image". This argument is disagreed with because teaching "the basis" is not the same as teaching the only, or exclusively, the basis, and does not rule out other sources for the displayed image. Applicant has a duty to teach the claimed invention, not merely imply. With respect to the broadness of the terminology of virtual image, it is noted that digital cameras produce data that can be stored in a computer and include a processor that converts the data to a displayed image, and as such, the limitation virtual image as claimed and as described can read on a digital camera image. With respect to the combination to include three dimensional qualities, using three dimensional displays, and their advantages, are well known in the art. One of ordinary skill in the art would find it obvious to weigh the advantages and/or possible disadvantages, and apply the known technology where needed or desired.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Wilson whose telephone number is 571-272-4722). The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez, can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***/John J. Wilson/  
Primary Examiner  
Art Unit 3732***

jjw  
May 30, 2007